

Indian Standard

(Reaffirmed 2004)

SPECIFICATION FOR
POULTRY DEBEAKERS

(Reaffirmed 2014)

(First Revision)

1. Scope — Lays down the requirements and the methods of test for poultry debeakers.

2. Terminology — For the purpose of this standard, the following definition shall apply.

2.1 Poultry Debeaker — An equipment designed and constructed for debeaking poultry by means of an electrically heated blade which would but and cauterize the beak at the same time.

3. Rated Voltage — The rated voltage shall be 230 to 240 V ac, single phase, 50 Hz.

3.1 Tractor or car batteries may also be used.

4. Material — The cutting blade shall be made of stainless steel or alloy steel. In case of stainless steel, it shall conform to grade 22 Cr 13 or 30 Cr 13 of IS : 1570 (Part 5)-1972 'Schedules for wrought steels for general engineering, purposes: Part 5 Stainless and heat-resistant steels (first revision)'. The body of the debeaker shall be made of 0.8 mm steel sheet [see IS : 513-1986 'Specification for cold rolled low carbon steel sheets and strips (third revision)'], or 0.63 mm galvanized steel sheets [see : IS : 277-1985 'Specification for galvanized steel sheets (plain and corrugated) (fourth revision)']. The body may also be mounted out of fibreglass or plastic with top cover of steel sheets.

5. Construction

5.1 Blade — The wire blade or flat blade with the following dimensions shall be used:

Length, mm	27 to 50
Width, mm, Min	12
Thickness, mm, Min	1.6

5.1.1 The contact area of the blade may be silver tipped.

5.2 Body — The body shall be compact and sturdy with sufficient space for air circulation. The dimensions of the debeaker are given below:

Length, mm	Width, mm	Height, mm
±5	±5	±5
300	150	100
300	140	140

5.3 Rod/Chain — The rod/chain shall connect the body at one end and a suitable spring and the wooden or metal foot pedal at the other. The length of the rod chain should be adjustable according to the convenience of the operator.

6. Other Requirements

6.1 The blade shall attain cauterizing temperature or the red hot condition in 5 seconds.

6.2 A suitable temperature control may be provided to adjust the heat of the blade to suit the age of birds to be debeaked.

6.3 A transformer with an input of 230 V and output not exceeding 6 V conforming to IS : 6297 (Part 2)-1973 'Specification for transformers and inductors (power, audio, pulse and switching) for electronic equipment: Part 2 Power transformers', shall be provided.

6.4 A flexible cord, sufficiently long shall be provided to connect the debeaker to the power supply. A power 'on/off' switch should be provided.

6.5 The blade should be capable of cutting at least 2 000 beaks without any carbon deposit on the blade.

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Gr 1

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6.6 A bulb may also be provided to facilitate debeaking of the birds during night time.

7. Marking and Packing

7.1 *Marking* — Each debeaker shall be marked legibly and indelibly with the following particulars:

- a) Manufacture's name or trade-mark,
- b) Rated input in watts, and
- c) Batch or code number.

7.1.1 *Certification marking* — Details available with the Bureau of Indian Standards.

7.2 *Packing* — As agreed to between the purchaser and the supplier.

8. Tests

8.1 *Time for Attaining Cauterizing Temperature* — The blade after it is switched on, shall attain its cauterizing temperature or the red hot condition within 5 seconds at an ambient temperature of 27°C in a draught free condition.

8.2 *Corrosion Resistance Test* — There shall be no red stains or spots on the blade after conducting the test prescribed in 8.2.1.

8.2.1 *Copper sulphate test* — The blade shall be scrubbed with soap and warm water, rinsed in hot water followed by a dip in 96 percent ethyl alcohol and dried. The sample shall be completely immersed in the copper sulphate solution at room temperature, allowed to remain for six minutes and then washed off with fresh water. The copper sulphate solution shall be made up as follows:

Copper sulphate	: 4.0 g
Sulphuric acid	: 10.0 g
Water	: 90.0 ml

EXPLANATORY NOTE

Debeaking is an essential feature for a profitable flock as it prevents losses caused by cannibalism, pickouts, egg eating, feather plucking and feed waste. Debeakers are, therefore, employed to remove upper beak of the bird midway between tip of the beak and nostrils taking care to keep the tongue out. Debeaking is done not by actually cutting the beak off but burning it by heat, and cauterizing and sealing the beak end hygienically, at the same time. Debeakers may also be used for trimming nails of the birds.

This standard covering the details of poultry debeakers was first published in 1974. Based on the comments received from Central Avian Research Institute (ICAR), Izatnagar, the standard has been revised to make it up to date.